

IN THE CLAIMS:

Please AMEND claims 1 and 11, and ADD claims 12-17, as follows:

1. (CURRENTLY AMENDED) A method of forming a first state and a second state alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level in an optical recording apparatus, the method comprising:

generating a recording waveform which includes a first multi-pulse having a plurality of first pulses corresponding to the first level of the input data and a second multi-pulse having a plurality of second pulses corresponding to the second level of the input data,

wherein a leading one of the second pulses is set to a low level and a power level between an end of the second multi-pulse and a first one of the pulses of the first multi-pulse is set to a high level.

2. (ORIGINAL) The method of claim 1, further comprising:

forming the first state on the optical recording medium according to the first pulses of the first multi-pulse; and

forming the second state on the optical recording medium according to the second pulses of the second multi-pulse.

3. (ORIGINAL) The method of claim 1, further comprising:

forming a mark as the first state on the optical recording medium according to the first multi-pulse; and

forming a space as the second state on the optical recording medium according to the second multi-pulse.

4. (ORIGINAL) The method of claim 1, wherein the generating of the recording waveform comprises:

changing the first multi-pulse according to a characteristic of the second pulses of the second multi-pulse.

5. (ORIGINAL) The method of claim 4, wherein the second multi-pulse comprises a starting pulse and an ending pulse, and the changing of the first multi-pulse comprises:

changing a starting pulse of the first multi-pulse according to a characteristic of one of the starting pulse and the ending pulse of the second multi-pulse.

6. (ORIGINAL) The method of claim 5, wherein the changing of the starting pulse of the first multi-pulse comprises:

changing a voltage level of the starting pulse of the first multi-pulse.

7. (ORIGINAL) The method of claim 1, further comprising:

generating information data representing a characteristic of one of the first multi-pulse and the second multi-pulse.

8. (ORIGINAL) The method of claim 7, further comprising:

rotating the optical recording medium in response to the information data.

9. (ORIGINAL) The method of claim 7, further comprising:

rotating the optical recording medium at a speed corresponding to the information data.

10. (ORIGINAL) The method of claim 7, further comprising:

recording the information data on the optical recording medium.

11. (CURRENTLY AMENDED) A method of forming a first state and a second state alternatively and sequentially on an information storage medium in response to input data having a first level and a second level, respectively, in a recording apparatus, the method comprising:

generating a recording waveform which comprises a recording pattern corresponding to the first level of the input data, an erase pattern having a multi-pulse corresponding to the second level of the input data, and a cooling pulse concatenating the recording and erase patterns,

wherein a leading pulse of the multi-pulse is set to a low level and a power level between an end of the multi-pulse and a first pulse of the recording pattern is set to a high level.

12. (NEW) A method of forming a first state and a second state alternatively and sequentially on an information storage medium in response to input data having a first level and a second level, respectively, in a recording apparatus, the method comprising:

generating a recording waveform which comprises a recording pattern corresponding to the first level of the input data, an erase pattern having a multi-pulse corresponding to the second level of the input data, and a cooling pulse concatenating the recording and erase patterns,

wherein a leading pulse of the multi-pulse is set to a high level and a power level between an end pulse of the multi-pulse and a first pulse of the recording pattern is set to a high level.

13. (NEW) A method of forming a first state and a second state alternatively and sequentially on an information storage medium in response to input data having a first level and a second level, respectively, in a recording apparatus, the method comprising:

generating a recording waveform which comprises a recording pattern corresponding to the first level of the input data, an erase pattern having a multi-pulse corresponding to the second level of the input data, and a cooling pulse concatenating the recording and erase patterns,

wherein a leading pulse of the multi-pulse is set to a low level and a power level between an end pulse of the multi-pulse and a first pulse of the recording pattern is set to a low level.

14. (NEW) A method of forming a first state and a second state alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level in an optical recording apparatus, the method comprising:

generating a recording waveform which includes a first multi-pulse having a plurality of first pulses corresponding the first level of the input data and a second multi-pulse having a plurality of second pulses corresponding to the second level of the input data,

wherein a leading second pulse is set to a high level and a power level between an end second pulse of the second multi-pulse and a leading first pulse is set to a high level.

15. (NEW) A method of forming a first state and a second state alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level in an optical recording apparatus, the method comprising:

generating a recording waveform which includes a first multi-pulse having a plurality of first pulses corresponding the first level of the input data and a second multi-pulse having a plurality of second pulses corresponding to the second level of the input data,

wherein a leading second pulse is set to a low level and a power level between an end second pulse of the second multi-pulse and a leading first pulse is set to a low level.

16. (NEW) A method of forming a first state and a second state alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level in an optical recording apparatus, the method comprising:

generating a recording waveform which includes a first multi-pulse having a plurality of first pulses corresponding to the first level of the input data and a second multi-pulse having a plurality of second pulses corresponding to the second level of the input data,

wherein

one of the first and second states corresponds to a space formed using an erase pattern including the corresponding one of the first and second multi-pulses having a high erase power and a low erase power for corresponding pulses,

the other one of the first and second states corresponds to a mark formed using a recording pulse including the corresponding other one of the first and second multi-pulses having a high write power and a low write power for corresponding pulses,

the low erase power is greater than the low write power, and

the generating of the recording waveform comprises causing a power level of a leading pulse of the erase pattern to be the same erase power as a power level of a trailing pulse of the erase pattern.

17. (NEW) A method of forming a first state and a second state alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level in an optical recording apparatus, the method comprising:

generating a recording waveform which includes a first multi-pulse having a plurality of first pulses corresponding to the first level of the input data and a second multi-pulse having a plurality of second pulses corresponding to the second level of the input data,

wherein

one of the first and second states corresponds to a space formed using an erase pattern including the corresponding one of the first and second multi-pulses having a high erase power and a low erase power for corresponding pulses,

the other one of the first and second states corresponds to a mark formed using a recording pulse including the corresponding other one of the first and second multi-pulses having a high write power and a low write power for corresponding pulses,

the low erase power is greater than the low write power, and
the generating of the recording waveform comprises causing a power level of a
leading pulse of the erase pattern to be the low erase power.